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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
RILEY, MARCUS T

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/766,906	YANG, SEUNG-SIK
	Examiner	Art Unit	
	MARCUS T. RILEY	2625	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 December 2008</u>.

2a)☒ This action is FINAL.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>30 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☒ All　b)☐ Some * c)☐ None of:

　　1.☒ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>08/05/2005; 01/27/2006</u>.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____

DETAILED ACTION

Response to Amendment

1.   This office action is responsive to applicant's remarks received on July 21, 2008. **Claims**

1-20 remain pending.

Response to Arguments

2.   Applicant's arguments with respect to amended **claims 1, 5, 9, 12, 15 &19** filed on July

21, 2008 have been fully considered but they are not persuasive.

A: Applicant's Remarks

For Applicants Remarks, see *"Applicant Arguments/Remarks Made in an Amendment"*

filed December 22, 2008.

A: Examiner's Response

The gist of Applicant's argument is that independent claim 1 recites determining whether

an error has occurred while the intermediate data is converted into the printing data and that there

is no teaching regarding when the error occurs. Applicant further argues that there is no teaching

of events transpiring with respect to intermediate data being converted into printing data.

Examiner understands Applicant's arguments but respectfully disagrees. Osada '569

either alone or in combination with Mori '882 teaches, suggest or discloses determining whether

an error has occurred while the intermediate data is converted into the printing data. Osada '569

at column 12, lines 31-31 plainly discloses where the intermediate data is stored in the rendering

buffer and then the rendering unit starts the printing. Osada '569 further teaches at column 9,

lines 60-63 that "some" error has occurred in the printing apparatus. Thus, it is inferred that

during the time the intermediate data is in the rendering buffer and before it is printed an Error

flag: "1" indicates that some error has occurred in the printing apparatus 110. Thus, Osada '569

does not fail to disclose "determining whether an error has occurred while the intermediate data

is converted into the printing data" as recited in claim 1.

As such, it is respectfully submitted that Osada '569 in combination with Mori '882 does

not fail to disclose the invention as recited in claim 1. As a result, the application is not in

condition for allowance.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Osada et al.

(US 6,600,569 hereinafter, Osada '569) in combination with Mori et al. (US 6,433,882

hereinafter, Mori '882).

Regarding claim 1; Osada '569 discloses a printing method for recovering an error,

comprising: storing intermediate data corresponding to a document to be printed (*"The rendering*

buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is

actually printed." column 3, lines 12-14);

converting the intermediate data into printing data (*"When 1-page intermediate data is stored in the*

rendering buffer 1513, the rendering unit 1514 starts print processing." column 12, lines 31-33);

determining whether an error has occurred (*"Error flag: "1" indicates that some error has occurred in*

the printing apparatus 110. column 9, lines 60-63);

while the intermediate data is converted into the printing data (*"The JL parser unit 1408 analyzes*

the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates

information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing ...thereby

converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily

stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."

column 2, lines 65-67 thru column 3, lines 1-24);

and in response to determining that an error has occurred, converting the intermediate

data into image type data and converting the image type data into the printing data, wherein the

document is printed using the printing data (*"This apparatus further includes a data conversion means*

(corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job,

which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate

data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion

performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image

data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to

a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

Osada '569 does not expressly disclose where the intermediate data being Graphic

Device Interface (GDI) function in a single enhancement meta file (EMF).

Mori '882 discloses where the intermediate data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF) (*"The print data generating unit 14 is for producing, for a single job, one or more intermediate files and a command file representing control data necessary for printing the subject print job. The one or more intermediate files are called **"Enhanced Meta Files"** (EMFs), and each intermediate file (EMF) represents a single page's worth of image to be printed. As shown in FIG. 2(b), **the print data generation unit 14 is constructed from an application 11, a printer driver 12, and a Graphical Device Interface (GDI) 13.** The application 11 is provided by the application program. The printer driver 12 is provided by the printer driver user interface included in the operating system (OS) program. **The Graphical Device Interface 13** is provided by the Graphical Device Interface program module included also in the operating system (OS) program."* column 6, lines 14-28).

Osada '569 and Mori '882 are combinable because they are from same field of endeavor of network printer systems (*"The present invention relates to an intermediate file processing device used in a printer control system."* Mori '882 at column 1, lines 8-9).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Osada '569 by adding where the intermediate data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF).as taught by Mori '882. The motivation for doing so would have been because it is advantageous to provide to provide an improved printer control system that enables the personal computer to control special print jobs using simple processes independent of the printer model (*"It is therefore an objective of the present invention to overcome the above-described problem and to provide an improved printer control system that enables the personal computer to control special print jobs using simple processes independent of the printer model."* Mori '882 at column 5, lines 1-2). Therefore, it would have been obvious to combine Osada '569 with Mori '882 to obtain the invention as specified in claim 1.

Regarding claim 2; Osada '569 discloses in response to determining that an error has not occurred or after determining that an error has occurred, and the intermediate data has been

converted into image type data and the image type data has been converted into the printing data,

determining whether the intermediate data has been completely converted into the printing data;

and in response to determining that the intermediate data has not been completely converted into

the printing data, going back to converting the intermediate data into the printing data *("This*

apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data

(corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data

(corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for

storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means

(corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the

intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit

1515)." column 20, lines 34-46).

Regarding claim 3; Osada '569 discloses where in response to determining that an error

has occurred, loading the stored intermediate data; converting the loaded intermediate data into

the image type data; and converting the image type data into the printing data *("This apparatus further*

includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to

PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to

rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate

data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering

unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means,

and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

Regarding claim 4; Osada '569 discloses where the error is a general protection fault

type error *("Error flag: "1" indicates that some error has occurred in the printing apparatus 110. This flag is added to a*

replay packet sent from the printing apparatus 110 to the host computer 109." column 6, lines 1-4).

Regarding claim 5; Osada '569 discloses a printing apparatus for recovering an error,

comprising: a storage unit storing intermediate data corresponding to a document to be printed

storing intermediate data corresponding to a document to be printed (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14);

a printer driver converting the intermediate data into printing data or, in response to a control signal, converting the intermediate data into image type data and then converting the image type data into the printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)."* column 20, lines 34-46).*

and a control unit inspecting whether an error has occurred while the intermediate data is converted into the printing data, outputting a result of the inspection as the control signal, and in response to the control signal, loading the intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver, wherein the document is printed using the printing data (*"In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance.* column 4, lines 13-24);

Osada '569 does not expressly disclose where the intermediate data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF).

    Mori '882 discloses where the intermediate data being Graphic Device Interface (GDI)

function in a single enhancement meta file (EMF) (*"The print data generating unit 14 is for producing, for a*

single job, one or more intermediate files and a command file representing control data necessary for printing the subject print

job. The one or more intermediate files are called "Enhanced Meta Files" (EMFs), and each intermediate file (EMF)

represents a single page's worth of image to be printed. As shown in FIG. 2(b), the print data generation unit 14 is constructed

from an application 11, a printer driver 12, and a Graphical Device Interface (GDI) 13. The application 11 is provided by the

application program. The printer driver 12 is provided by the printer driver user interface included in the operating system (OS)

program. The Graphical Device Interface 13 is provided by the Graphical Device Interface program module included also in

the operating system (OS) program." column 6, lines 14-28).

    Osada '569 and Mori '882 are combinable because they are from same field of endeavor

of network printer systems (*"The present invention relates to an intermediate file processing device used in a printer*

control system." Mori '882 at column 1, lines 8-9).

    At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Osada '569 by adding where the intermediate

data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF).as

taught by Mori '882. The motivation for doing so would have been because it is advantageous to

provide to provide an improved printer control system that enables the personal computer to

control special print jobs using simple processes independent of the printer model (*"It is therefore an*

objective of the present invention to overcome the above-described problem and to provide an improved printer control system

that enables the personal computer to control special print jobs using simple processes independent of the printer model." Mori

'882 at column 5, lines 1-2). Therefore, it would have been obvious to combine Osada '569 with Mori

'882 to obtain the invention as specified in claim 5.

Regarding claim 6; Osada '569 discloses where the control unit inspects whether the

intermediate data has been completely converted into the printing data by the printer driver, and

outputs a result of the inspection as a conversion signal to the printer driver, and the printer

driver converts the intermediate data into the printing data in response to the conversion signal

(*"Note that when the PDL translator unit 1512 recognizes the start of analysis of a job to which a new job number is assigned*

from the reception buffer 1511, the reception buffer 1511 updates the job state information 406 in the job management table

in the device database unit 1509 to "analyzing". The rendering buffer 1513 temporarily stores a rendering object until it is

actually printed. When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print

processing." column 12, lines 24-33).

Regarding claim 7; Osada '569 discloses discloses where the control unit comprises: an

error inspector, which inspects whether an error has occurred while the intermediate data is

converted into the printing data and outputs a result of the inspection as the control signal (*"In*

addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the

printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver

unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be

performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit

1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs

the real-time performance. column 4, lines 13-24); See also (*"Note that when the PDL translator unit 1512 recognizes the*

start of analysis of a job to which a new job number is assigned from the reception buffer 1511, the reception buffer 1511

updates the job state information 406 in the job management table in the device database unit 1509 to "analyzing". The

rendering buffer 1513 temporarily stores a rendering object until it is actually printed. When 1-page intermediate data is stored

in the rendering buffer 1513, the rendering unit 1514 starts print processing." column 12, lines 24-33).

and a data loader, which in response to the control signal, loads the intermediate data

from the storage unit and outputs the loaded intermediate data to the printer driver (*"Note that when*

the PDL translator unit 1512 recognizes the start of analysis of a job to which a new job number is assigned from the reception

buffer 1511, the reception buffer 1511 **updates the job state information 406 in the job management table in the device**
database unit 1509 to "analyzing". *The rendering buffer 1513 temporarily stores a rendering object until it is actually printed.*
When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing." column
12, lines 24-33).

   Regarding claim 8; Osada '569 discloses a spooler loaded with intermediate data from
the storage unit and outputting the loaded intermediate data to the printer driver, wherein the
printer driver converts the intermediate data received from the spooler into the printing data (*"The*
rendering buffer 1410 temporarily stores the intermediate data of the **rendering object generated by the PDL translator unit**
1409 until it is actually printed." column 3, lines 12-14).

   Regarding claim 9; Claims 9 contains substantially the same subject matter as claim 1
except the computer-readable recording medium. Therefore, claim 1 is rejected on the same
grounds as claim 1. In addition, Osada '569 discloses a computer-readable recording medium
storing a computer program (*"There are also provided a ...storage* **medium storing a printing control program.**"
column 6, lines 9-11);

   Regarding claim 10; Claim 10 contains substantially the same subject matter as claim
claim 2. Therefore, claim 10 is rejected on the same grounds as claim 2. In addition, Osada '569
discloses a computer-readable recording medium storing a computer program (*"There are also*
provided a ...storage **medium storing a printing control program.**" column 6, lines 9-11).

   Regarding claim 11; Claim 11 contains substantially the same subject matter as claim
claim 3. Therefore, claim 11 is rejected on the same grounds as claim 3.

   Regarding claim 12; Independent claim 12 contains substantially the same subject
matter as independent claim 1. Therefore, claim 12 is rejected on the same grounds as claim 1.

Regarding claim13; Osada '569 discloses where if determined that the intermediate data has not been completely converted into printing data, going back to converting the intermediate data into printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)."* column 20, lines 34-46).

Regarding claim 14; Claim 14 contains substantially the same subject matter as claim 4. Therefore, claim 14 is rejected on the same grounds as claim 4.

Regarding claim 15; Independent Claim 15 contains substantially the same subject matter as independent claim 5. Therefore, claim 15 is rejected on the same grounds as claim 5.

Regarding claim 16; Claim 16 contains substantially the same subject matter as claim 6. Therefore, claim 16 is rejected on the same grounds as claim 6.

Regarding claim 17; Claim 17 contains substantially the same subject matter as claim 7. Therefore, claim 17 is rejected on the same grounds as claim 7.

Regarding claim 18; Claim 18 contains substantially the same subject matter as claim 8. Therefore, claim 18 is rejected on the same grounds as claim 8.

Regarding claim 19; Osada '569 discloses a printing apparatus for recovering an error, comprising: a storage unit storing intermediate data corresponding to a document to be printed

("The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed." column 3, lines 12-14);

a printer driver converting the intermediate data into image type data *("When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing." column 12, lines 31-33);*

and then converting the image type data into printing data in response to a control signal *("and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46);*

and a control unit determining whether an error has occurred while the intermediate data is converted into the printing data, outputting a control signal according to the determination, and in response to the control signal, outputting the loaded intermediate data to the printer driver, wherein the document is printed using the printing data *("This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).*

Osada '569 does not expressly disclose where the intermediate data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF).

Mori '882 discloses where the intermediate data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF) *("The print data generating unit 14 is for producing, for a single job, one or more intermediate files and a command file representing control data necessary for printing the subject print job. The one or more intermediate files are called "Enhanced Meta Files" (EMFs), and each intermediate file (EMF) represents*

a single page's worth of image to be printed. As shown in FIG. 2(b), the print data generation unit 14 is constructed from an

application 11, a printer driver 12, and a Graphical Device Interface (GDI) 13. The application 11 is provided by the

application program. The printer driver 12 is provided by the printer driver user interface included in the operating system (OS)

program. The Graphical Device Interface 13 is provided by the Graphical Device Interface program module included also in the

operating system (OS) program.." column 6, lines 14-28);

Osada '569 and Mori '882 are combinable because they are from same field of endeavor

of network printer systems (*"The present invention relates to an intermediate file processing device used in a printer*

control system." Mori '882 at column 1, lines 8-9).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Osada '569 by adding where the intermediate

data being Graphic Device Interface (GDI) function in a single enhancement meta file (EMF).as

taught by Mori '882. The motivation for doing so would have been because it is advantageous to

provide to provide an improved printer control system that enables the personal computer to

control special print jobs using simple processes independent of the printer model (*"It is therefore an*

objective of the present invention to overcome the above-described problem and to provide an improved printer control system

that enables the personal computer to control special print jobs using simple processes independent of the printer model." Mori

'882 at column 5, lines 1-2). Therefore, it would have been obvious to combine Osada '569 with Mori

'882 to obtain the invention as specified in claim 19.

Regarding claim 20; Claim 20 contains substantially the same subject matter as claim 6.

Therefore, claim 20 is rejected on the same grounds as claim 6.

Examiner Notes

5.   The Examiner cites particular columns and line numbers in the references as applied to

the claims above for the convenience of the applicant.   Although the specified citations are

representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcus T. Riley
Assistant Examiner

Art Unit 2625

/MARCUS T. RILEY/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625